

NOAA Ship Oscar Sette



Rapid Ecological Assessments (REA)



- coral**
- **fish coral**
- **fish**
- **invertebrates**
- **algae**



- (2000-2002) **Characterization:**

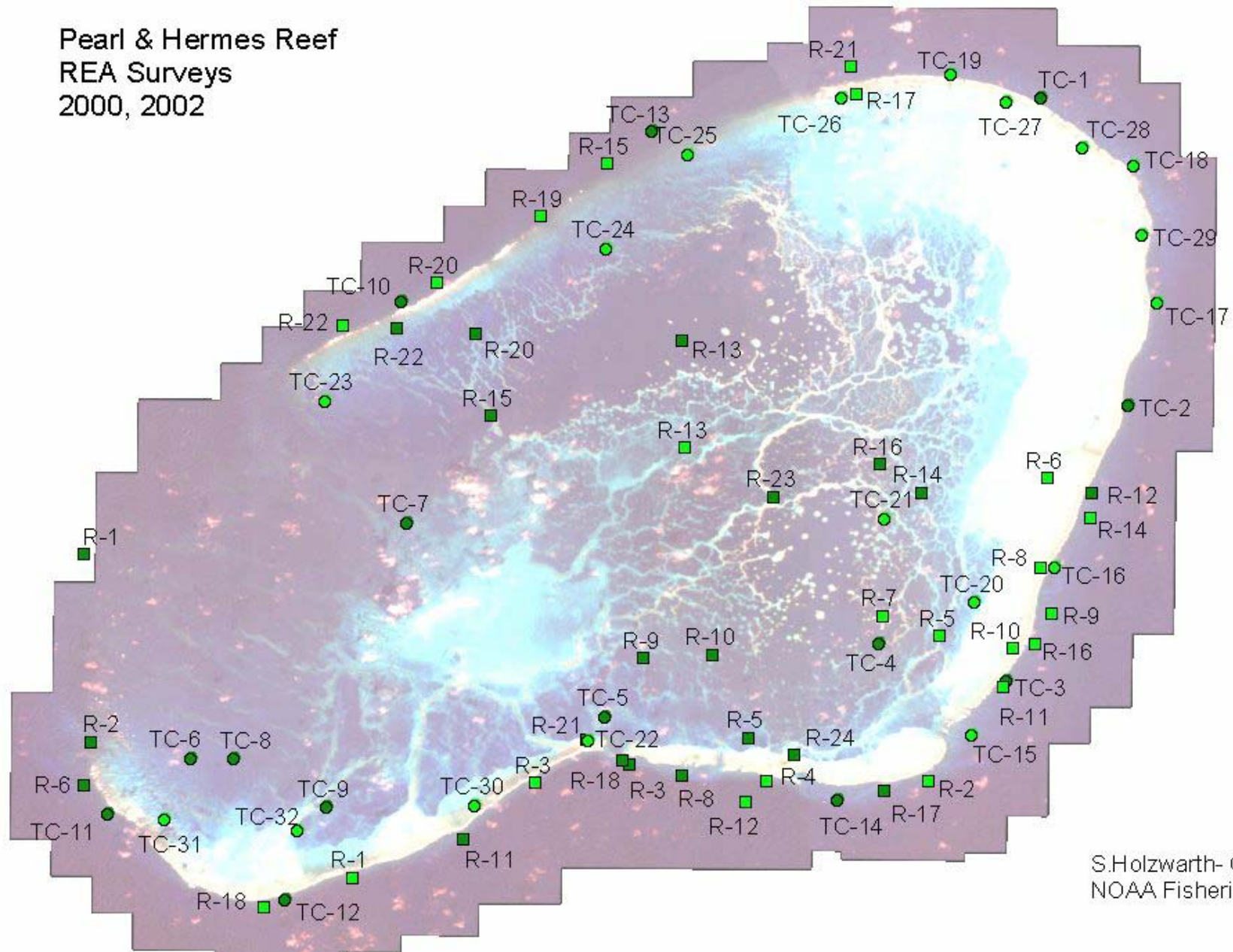
as many REAs as possible to document the distribution and abundance of organisms

- (2003) **Monitoring:**

Select a few sites representative of different habitat types, e.g. forereef, backreef, lagoonal/patch reef



Pearl & Hermes Reef
REA Surveys
2000, 2002



S.Holzwarth- CREI
NOAA Fisheries

NWHI Sites Surveyed 2002-2003

Island	2002 (REA)	2003 (Monitor)
Nihoa	3	0
Necker	7	3
FFS	32	12
Gardner	6	3
Maro	16	9
Laysan	13	3
Lisianski	26	9
P & H	37	15
Midway	32	11
Kure	23	9
TOTAL	195	74

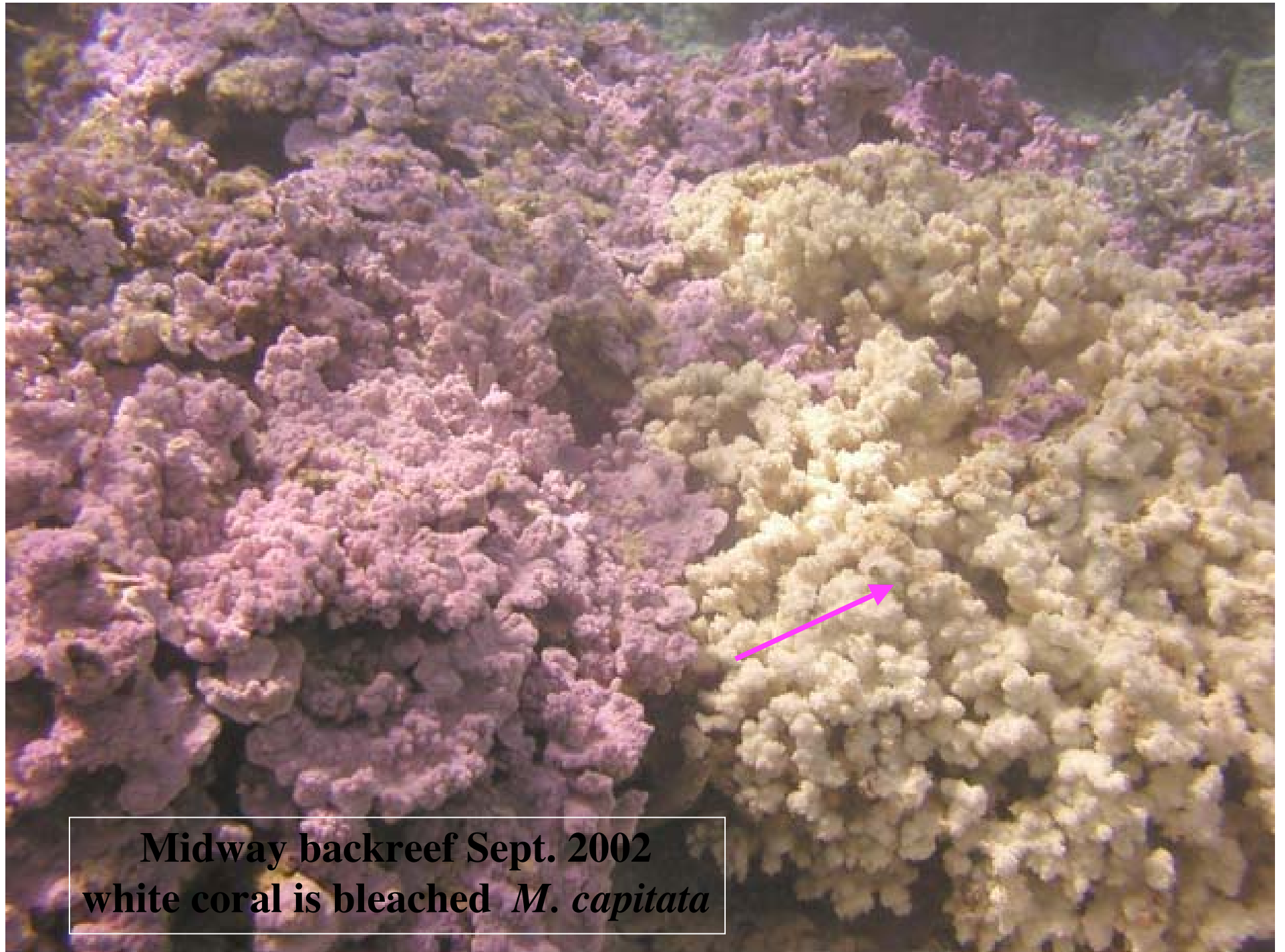
2002: Coral Bleaching



loss of zooxanthellae
loss of photosynthetic pigment within zooxanthellae



Midway backreef 2001
brown coral with white tips is healthy *Montipora capitata*



Midway backreef Sept. 2002
white coral is bleached *M. capitata*



Midway backreef July 2003
dead *M. capitata* now covered in algae

French Frigate Shoals: Disease in *Acropora* Coral

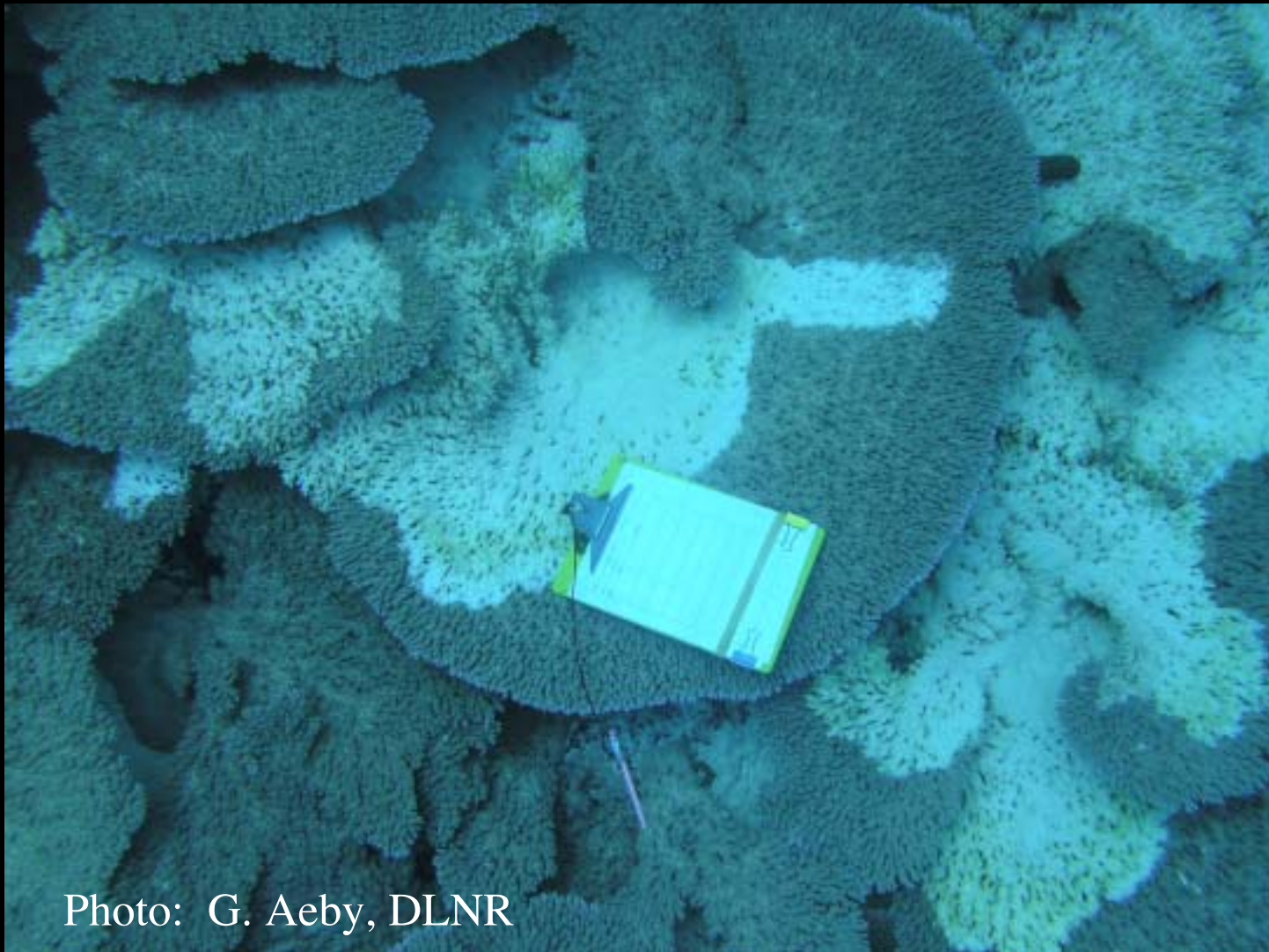


Photo: G. Aeby, DLNR

French Frigate Shoals: Tumors in *Acropora* Coral



Photos: G. Aeby, DLNR

NOAA Office of Ocean Exploration 2003 NWHI Research

- **Submarine Canyons and Scavenger Communities**
(Smith and Vetter)
- **Deep-Water Fish and Precious Coral Communities**
(Parrish and Marshall)
- **Seamount Surveys of Deep-Water Fauna and Geology**
(Baco-Taylor, Shank, Smith, Kelley)
- **Reproductive Biology and Population Genetics of Precious Corals** (Baco-Taylor)
- **Impact of Bottomfishing on Banks in the NWHI**
(Malahoff, Kelley, Smith)

Coming in 2004: NOAA Ship Hi`ialakai



